

Living Atlas 1 Sprint 5 - Report

Long, Joshua
Kolb, Mitchell, William
Svetlik, Sierra Amelia

Introduction

This sprint started on September 24th and ended on November 3rd because of the week extension we were given near the end for this sprint. This sprint focused on solving the left over issues that come up after we have fully merged with the Living Atlas Map team and create new functionality so they can use our data from the backend/database which affects the frontend cards.

Retrospection of Last Sprint

Long, Joshua

In our last sprint, we had two objectives. First, we needed to communicate more effectively with the other Living Atlas team about integration, ensuring that all systems and functionalities mesh well together. Our second goal was to address the file server. This component is crucial to our project's infrastructure, and focusing on its completion will be one of the most important milestones for the Living Atlas project.

Kolb, Mitchell, William

Looking back at the last sprint I was tasked with implementing a file server to upload and download files from when the backend is run locally. I was able to complete this by writing two endpoints, uploadFile and downloadFile. The uploadFile endpoint takes any file format and uses python to send the bytes of that file to a preset folder where files are intended to be stored. The best part about this endpoint is that I have written it where it can work on any file system because it finds the file path to the current folder then attaches the "savedFiles" folder to it. It will then save the directory path to locate the file along with other file details to the database. The downloadFile endpoint takes in a directory path intended to be from the database and sends the file to the frontend using the filerresponse python framework. My other task last sprint was to make a tag filter which was completed but after continuous meetings with the client the purpose of tags were slightly changed so the work I did last sprint will have to be redone.

Svetlik, Sierra Amelia

During the fourth sprint I was assigned the task of refining the database as needed. This was important because we were working on integrating the map into the app and finishing other parts such as login, and polishing what was already there. Refining the database meant changing tables, adding and deleting tables if needed, and adding fake data for retrieval. Another task I had was making a schema once the database was finalized. The schema helps illustrate the relations of the tables of the database.

Result of Sprint - 5 Planning

Long, Joshua

For this sprint, we set three distinct objectives. First, create tests to ensure the stability and reliability of our features. Second, we dedicated our efforts to finalizing the filtering functionality. Our third goal revolved around deployment.

Kolb, Mitchell, William

My task this sprint is to remake my endpoints to incorporate files and new category/tag requirements when they are retrieved to display, create test cases for all of the backend to achieve continuous integration (CI), and lastly I will look into deploying my backend publicly on a hosting service so we no longer have to run the backend locally to interact with the app. To deploy I will have to take advantage of continuous delivery (CD) using github actions so every commit is reflected on the deployed backend.

Svetlik, Sierra Amelia

This sprint I planned for helping out where I could. Since the database is pretty complete, I will help out my teammates however I can.

Sprint Task Assignment

Long, Joshua

1. FrontEnd - Enable bubble filtering
2. FrontEnd - Enable Map filtering
3. FrontEnd - Enable deployment
4. FrontEnd - Create Tests

For this sprint, I will have three sprint tasks. Enable bubble filtering & Map filtering. Enable deployment. Create Tests.

Kolb, Mitchell, William

1. Backend - Remake endpoints
 - a. For attached files
 - b. For new requirements on categories and tags
2. Backend - Create Test cases for all endpoints

3. Backend - Look into deploying the backend publicly

For this sprint, I will have three sprint tasks. Adjust all the previously created endpoints to retrieve files if there are any attached and categories/tags since the client has changed the purpose of them recently, along with creating test cases and deploying the backend if time allows.

Svetlik, Sierra Amelia

1. Offer support

For this sprint, I have 1 task. To help out my team in any way I can.

Sprint Task(s) Details

Long, Joshua

1. **FrontEnd** - Enable bubble Filtering

For bubble filtering, we can select a dropdown filter or a custom filter. The applied filter will be shown as a bubble.

2. **FrontEnd** - Enable Map Filtering

For the map filter when we zoom or move the map the longitude and latitude will be passed as a Geo filter and filter the cards in real time.

3. **FrontEnd** - make test

I made several code-based tests and specification tests. I especially tested the card display, filter, and delete.

4. **FrontEnd** - deploy

I am working on deploying the front-end app. I first deploy it on Netlify. By currently it has problems so I'm considering to change to Azure

Kolb, Mitchell, William

1. **Backend** - Remake Endpoints

To satisfy this task I will implement the features to show files and the new category and tag features to all endpoints that need it, for example I have an endpoint that retrieves all card information to display on the card list side of the website when it initially loads. This endpoint should now return file information and the correct filters.

2. **Backend** - Create Test Cases

To satisfy this task I will implement a couple test cases for every endpoint in the backend using the fastAPI test client library. This library should allow me to test the returned status code and return values in json format. I am using the fastapi.testclient library that is included in fastAPI to test out my endpoints

3. Backend - Deploy Backend

To satisfy this task I will at minimum look into services that can host my backend for free or for very cheap. If any of the options I look into are promising I will attempt to setup the github actions file to have it deploy from the github repo or setup a docker file to personally set it up myself. The goal is to have it be accessible from any browser.

Svetlik, Sierra Amelia

1. Offer support

To do this, I will reach out to my teammates and pick up any task they need help with in order to allow the application to be completed on time and in the best shape possible.

Minutes of Meeting

Meeting 1

Meeting Date and Time: Monday August 21st 5pm

Attendees: Mitchell, Josh, Sierra, Prof. Subu, Jan Boll

Agenda:

- Reintroduction of the project since the last time our team and the client have met.
- Go over goals that we have this semester and our initial plans on how we are going to finish the project

Meeting Notes:

- This meeting was intended to be a reintroduction to the work that the living atlas database team worked on last semester. This meeting was around 20 minutes and the three of us started by going through the presentation that we made at the end of sprint 3 to wrap up the project at the time. After we went through the presentation we had a live showcase of the website in its current state. Josh

displayed his frontend, Mitchell displayed his backend and database. After this we all talked about our potential goals and where we see the project going this fall.

Action Items/Postponed-Items:

- Action Items:
 - The entire team will plan on finishing the functionality of the website (ETA end of sprint 1)
 - Josh will begin implementing the frontend with the living atlas map team (ETA end of sprint 1)
- Postponed Items:
 - NA

Miscellaneous:

- Jan Boll took notes and screenshots during the meeting with the intention of sending them over to Julie Padowski so she can be caught up with how the project is going when we meet with her next time.
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Meeting 2

Meeting Date and Time: Thursday September 14th 3:30pm

Attendees: Mitchell, Josh, Sierra, Jan Boll, Julie Padowski

Agenda:

- Show the client the new file server functionality that allows files to be attached to cards.
- Show the client the log in/register pages
- Show off the CEREO data that we entered into the database to replace the old placeholder data we had in before. Get approval of how it looks in the cards.
- Ask the client about MFA with the login pages
- Ask the client about the look of the website to see if they have preferences on adding a color scheme or department logo.

Meeting Notes:

- This meeting was very familiar in style to how the team-client meetings went last semester. This meeting lasted about 40 minutes in total. We started off with introductions as this was the first time Julie has met with our team this semester, and then went into a showcase of the new work that our team completed since the last meeting. Josh showed off the download file button that is attached to each card and the log in/register pages that he made. Mitchell talked about the

specifics of saving files to the backend. Sierra talked about the possibility of adding multi-factor authentication with the user accounts. The clients said that this feature is something that we can focus on adding in later. After the three of us finished talking about each of our sections we opened the meeting up to questions. Julie and Jan asked some questions about the format of the cards and linking to websites along with the “download file” button. Our team asked the client if the presentation of the website is to their liking and if they wanted to add any details regarding colors or logos and they said that a logo would look good in a spot along the top left of the header bar at the top of the web page. At the end of the meeting we talked about the timeline of the project and what we expect to show them at the next meeting. We expect to show them the website with the map included and functional from the other team because that is what they have been working on.

Action Items/Postponed-Items:

- Action Items:
 - The entire team will work on the tag filter system (ETA code review Sep 22nd)
 - The front and backend will work on logging in and authenticating users (ETA code review Sep 22nd)
- Postponed Items:
 - Deployment options and prices will be talked about later as we need more information regarding prices
 - A version of the website with the map and cards together will be shown in the next meeting because as of the current moment it is not ready.

Miscellaneous:

- We talked about the possibility of moving the weeks that we have the meetings with the client to the other set of Thursdays every other week. This would mean that we could meet with the client the following week. This could mean that in the next meeting there might be less to talk about, because until the code review with our professor we don't know how far along the other team is with integrating the map into the left side of the living atlas home page. We will get more details as the next week comes around.
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Meeting 3

Meeting Date and Time: Thursday September 21th 3:30pm

Attendees: Mitchell, Josh, Sierra, Jan Boll, Julie Padowski

Agenda:

- Show the client the new filter feature
- Ask questions about tags

Meeting Notes:

- During the recent meeting, several key updates were shared by team members. Josh presented the newly developed filter functionality, providing an in-depth look into its capabilities. Following Josh, Sierra delved into discussions regarding the potential tags, offering insights into their application and relevance. To conclude, Mitchell showed the additional filter endpoints he has developed, underscoring their significance and utility for the project. Julie and Jan asked some questions about integrating the projects with the other team. Also, we discuss the possibility of creating an Admin page.

Action Items/Postponed-Items:

- Action Items:
 - Both the Frontend and Backend must finish up the filter functionality
 - Complete the integration with the other team
- Postponed Items:
 - N/A

Miscellaneous:

- N/A
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Meeting 4

Meeting Date and Time: Thursday October 5, 2023, 3:30pm

Attendees: Wyatt Croucher, Joshua Long, Julie Padowski, Jan Boll, Phearak Both Bunna, Flavio Alvarez Penate, Mitchell Kolb, Sierra Svetlik

Agenda:

- Discuss filtering tags; ensure that our prototype has the proper filtering buttons (Wyatt)
- Finalize map marker data format (Flavio)
- Do a quick demo of the project

- Discuss how NHD streams data provided should be displayed and what should be in the popup after clicking (Both)

Meeting Notes:

- Gave a demo of the current application with the current features that have been implemented.
- Filters: River, Watershed, Communities, Landscapes, Organisms, Stories, People, Mapped Data
- Buttons for data (spatial or non-spatial data)
- Have options for people to input optional data tags on top of the required ones
- Input latitude and longitude along with brief description or link associated with some of the data

Action Items/Postponed-Items:

- Action items:
 - Finalize filter buttons as soon as possible; waiting for response from client for finalized list.
 - Display the first 5 or 6 properties in the popup for the urban area
 - Cards need to update as the view of the map changes (on the back-burner)

Miscellaneous

NA

Meeting 5

Meeting Date and Time: Thursday October 19th 3:30pm

Attendees: Mitchell, Josh, Sierra, Flavio, Both, Wyatt, Jan Boll, Julie Padowski

Agenda:

- Ask whether clients want color coded map markers to go along with the cards
- Ask about funding for elephant sql plans so both teams can have connections at once
- Do a quick demo of the project
- Ask questions about filters and color
- Talk about issues with filtering by view

Meeting Notes:

- Gave a demo of the current application with the current features that have been implemented. Features include card color-coding and filtering of major tags. Also discussed pricing of database services, an email will be sent out to the client and group members (as well as Subu) after the meeting to figure out which option suits the clients needs.

Action Items/Postponed-Items:

- Action items:
 - Determine pricing plan for the database services and work with the client to start a short trial of those services.
 - Continue to implement the camera view boundary functionality so that map only returns cards relevant to the map space.
 - Add color coding to the markers as well as the cards.

Miscellaneous

- We mentioned the possibility of payment for an expanded elephantSQL service. Details will be given at a later date whether we actually need to pay for that.
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